

# Bradley Kohler

MECHATRONICS ENGINEER · 1 YEAR OF WORK EXPERIENCE · 16 MONTHS OF CO-OP EXPERIENCE

Waterloo, ON, Canada

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## Skills

Languages	Machine Learning	Microprocessor firmware	(Embedded) Operating Systems	PCB hardware design	Systems design	Mathematics
BASH C/C++ Python Java	PyTorch Tensorflow	STM32 Nordic Qualcomm Simulink	Linux FreeRTOS mbedOS ChibiOS	Verilog HDL NI Multisim Eagle	AutoCAD SolidWorks Maplesim	Maple18 NumPy Eigen MATLAB

## Work Experience

### Labforge Inc.

SOFTWARE & FIRMWARE DEVELOPER

Waterloo, Ontario

May 2020 - Present

- Developed neural network structures, criteria and optimization techniques, achieving good performance in the field.
- Authored new approaches to object re-identification and tracking, creating fast and robust software solutions.
- Improved inertial sensor code bases, running sensor processes as daemons on cameras.
- Worked collaboratively with a team to develop a reliable C/C++ state estimation engine for stereo camera tracking.

### Northern Digital Inc.

ADVANCED RESEARCHER & FIRMWARE DEVELOPER

Waterloo, Ontario

May 2018 - Sept. 2019

- Utilized problem-solving skills and successfully implemented data fusion algorithms on 3D guidance systems.
- Using creative skills, authored new data fusion algorithms for 3D guidance systems achieving NASA level TRL4.
- Worked collaboratively with a team to develop a C/C++ simulator for virtual reality 3D inertial data.

### McMaster University

ADVANCED RESEARCHER & TEACHING ASSISTANT

Hamilton, Ontario

May - Dec. 2015 & May - Sept. 2017

- Demonstrated computer skills by developing embedded C/C++ software for safety critical systems.
- Exercised good organization skills by creating software documentation for system design.

### Emnor Mechanical Inc.

SOFTWARE DEVELOPER & MECHANICAL REPAIRMAN & SHOP EMPLOYEE

Hamilton, Ontario

May - Sept. 2015 & May - Sept. 2016

- Demonstrated good organization skills by developing an inventory management software for the company warehouse.
- Consistently applied attention to detail in managing company payroll, invoices and purchase orders.

## Education

### McMaster University

MECHATRONICS ENGINEERING CO-OP

Hamilton, Ontario

Expected Graduation April 2020

- McMaster Cumulative Grade Point Average 3.5/4.0
- McMaster Engineering Co-op Student of the Year Nominee

## Projects

### Bottlenose

DEVELOPER

Waterloo, Ontario

May 2020 - May 2021

- Trained, Tested and Deployed neural network models to on cameras.
- Developed complex state estimation solutions for object tracking.

### Atraxa

DEVELOPER

Waterloo, Ontario

January - Sept. 2019

- Developed the embedded firmware including the drivers, structure and build system for the virtual reality hand remotes.
- Solved complex firmware anomalies with low-level programming knowledge.

### Retina

DEVELOPER

Hamilton, Ontario

Sept. 2019 - April 2020

- Developed Ultra-Wide Band indoor navigation system for the visually impaired.
- Developed backend services for indoor routing and GeoCoding.